

**FARMERS' MUTUAL
COOPERATIVE**

IOWA

EPA ID# IAD022193577

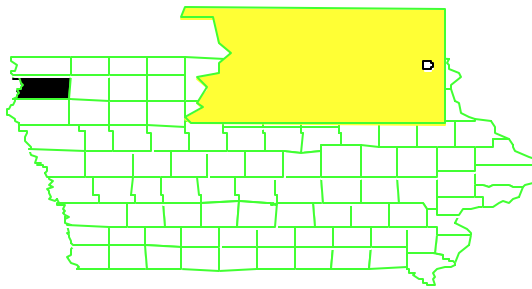
EPA Region 7

City: Hospers

County: Sioux County

Other Names:

05/07/2003



SITE DESCRIPTION

The Farmers' Mutual Cooperative is an agricultural supply and service business, now operating under the name of Midwest Farmers' Cooperative that has operated at this 6-acre site since 1908. The site lies several hundred feet east of the Floyd River in the northwestern corner of the City of Hospers. Bulk fertilizer and pesticides were handled at the site until 1992. The site continues to be used for grain storage. In 1984, the state found herbicides and carbon tetrachloride in water from three shallow municipal wells located adjacent to the site. The state first restricted, then prohibited, the use of these three wells. Investigations conducted by the Cooperative found groundwater contamination in the relatively small area between the site and the Floyd River. The herbicide contamination appears to be the result of incidental releases during normal operations throughout the site. The carbon tetrachloride contamination of groundwater appeared to be the result of previous on-site and off-site use of carbon tetrachloride for grain fumigation.

Site Responsibility:

This site is being addressed through federal, state, and potentially responsible parties' actions.

NPL LISTING HISTORY

Proposed Date: 06/24/1988

Final Date: 08/30/1990

Deleted Date: 11/13/2001

THREATS AND CONTAMINANTS



Groundwater contamination has resulted in the closure of three city wells. A variety of common herbicides were detected in the site groundwater including alachlor, atrazine, cyanazine, metolachlor, metribuzin, and trifluralin. Atrazine was the most problematic as it had consistently been found in doses above the maximum drinking water standard. Carbon tetrachloride was also initially found in groundwater in doses above drinking water standards; however, recent studies have shown carbon tetrachloride contamination to have virtually disappeared. Herbicides have been detected in site soils, although not at levels of health concern. The site groundwater discharges to the Floyd River without significant impact. Pesticide concentrations have been shown to be below cleanup standards for three consecutive sampling events (November 1997 through November 1999) and therefore, the Iowa Department of Natural Resources (IDNR) has approved the Farmers' Mutual Cooperative request to discontinue groundwater monitoring for pesticides.

CLEANUP APPROACH

Response Action Status

Entire Site: The Farmers' Mutual Cooperative conducted investigations at the site in cooperation with the state beginning in 1984. Between 1984 and 1992 groundwater contamination was identified, two rounds of soil sampling occurred and four phased site investigations were conducted under the Remedial Investigation/Feasibility Study (RI/FS). In 1992, four groundwater monitoring events were completed. In September 1992, the Record of Decision (ROD) was signed. The selected remedy was natural attenuation and groundwater and surface water monitoring with a drinking water contingency. The carbon tetrachloride contamination had already diminished significantly as the result of natural attenuation, and herbicide levels were decreasing. Farmers' Mutual Cooperative conducted sampling in 1993 to assess the potential for blending of the shallow and deep groundwater wells. The results showed that nitrate which is not a contaminant of concern was found at a concentration that would most frequently limit blending. The city of Hospers decided that because nitrate was extremely expensive to treat they would abandon the shallow wells and connect to the Hospers rural water system.

Site Facts:

In 1986, the state ordered the Cooperative to determine the nature and threat of contamination and to identify cleanup alternatives. In 1987, the Cooperative entered into a Consent Order with the state in which they agreed to conduct this work.

In 1993, the city requested use of the shallow wells. This request activated the drinking water contingency. Test pumping was performed by the Cooperative in 1993 and 1994. The results of the test pumping demonstrated that the contaminants generally were present at levels that would allow 50 percent blending of the city's shallow well water with the city's deep well water. However, nitrate was found in the groundwater at nearly three times the drinking water standard. Treating the shallow groundwater to eliminate the nitrate would have been extremely expensive and difficult to maintain. Following the completion of the test pumping, the city had concerns about regaining use of the city's shallow wells and did not seek to implement a blending program. The city elected to plug the three shallow city wells.

In late 1996, the city connected to the Hospers rural water system for their water supply. In July and August of 1997, the three shallow city wells were plugged and permanently abandoned. These actions eliminated the need for the drinking water contingency.

The groundwater and surface water monitoring included in the selected remedy began in 1996. The purpose of the monitoring was to determine the effectiveness of natural attenuation. The groundwater monitoring system consisted of seven monitoring wells. The surface water monitoring system for the site consisted of upstream and downstream sampling locations. The Cooperative conducted groundwater and surface water monitoring events in January 1996, July 1996, November 1997, September 1998, and November 1999. The site monitoring program included herbicides (alachlor (Lasso), cyanazine (Bladex), metolachlor (Dual), metribuzin (Sencor), trifluralin (Treflan) and atrazine) and benzene, toluene, ethylbenzene and xylene.

Monitoring detected the herbicides atrazine, metolachlor, and metribuzin in groundwater, but only atrazine was above the drinking water standard of 3 parts per billion (ppb). Atrazine was found at 4.9 ppb in one of the monitoring wells during two separate sampling events.

The petroleum contaminants benzene, toluene, ethylbenzene and xylene, have been detected in the groundwater, but only benzene is above the safe drinking water standard of 5 ppb. Benzene was detected at 548 ppb in January 1996, and 614 ppb in July 1996. During the sampling event in November 1997, benzene was not detected in the groundwater.

Pesticide concentrations were shown to be below clean-up standards for three consecutive sampling events during November 1997 through November 1999.

Groundwater and surface water sampling have demonstrated that natural attenuation is occurring at this site. The city has removed the threat of exposure to contaminated groundwater by connecting to the Hospers rural water system for their water supply and plugging and permanently abandoning the three shallow city wells.

EPA conducted a five-year review of this site in September 2000. Based on the information gathered during the five-year review, the remedy continues to provide adequate protection of human health and the environment. Pesticide concentrations have been shown to be below standards which has allowed the IDNR to approve the Farmers' Mutual Cooperative recommendation to discontinue the groundwater monitoring for pesticides. Due to the fact that Superfund hazardous substances, pollutants, or contaminants no longer remain at the site above the levels that allow for unrestricted use and unlimited exposure, another five-year review is not required.

ENVIRONMENTAL PROGRESS



Natural attenuation has resulted in significantly decreased levels of contaminants in groundwater. Because the city of Hospers has abandoned the use of the three shallow city wells and connected to the rural water system, there is no longer any threat to public health.

SITE REPOSITORY



Hospers City Hall
Hospers, IA 51238

Iowa Department of Natural Resources
Records Center, 5th Floor
Wallace State Office Building
900 East Grand
Des Moines, IA 50319

Superfund Records Center
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Kansas City, KS 66101
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REGIONAL CONTACTS

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MISCELLANEOUS INFORMATION

STATE:

IA

07Q8

CONGRESSIONAL DISTRICT:

05

EPA ORGANIZATION:

SFD-SUPR/MOKS

MODIFICATIONS

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